

## A NEW SPECIES OF THE GENUS *SAIS* (LEPIDOPTERA : DANAIDAE)

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In this paper, a new species of the genus *Sais*, belonging to the Ithomiinae, is described. Fox (1967) recognized only one species in this genus, *Sais rosalia* (Cramer), in his monograph (Part 3).

The author participated in the expedition "La Expedición Japonesa a las Zonas Amazónicas, 1973", organized by an explorative association "Congreso Andinista del Japón" and the Kyôdô Press, and collected three males of an unknown Ithomiid butterfly in the tropical rain forest near Mitú, Vaupés, Colombia. The colour pattern of this species is very similar to that of *Napeogenes inachia johnsoni* Fox & Real, but it is to be treated as a new and the second species of the genus *Sais* by investigating the venation and the male genitalia.

The author wishes to express his cordial thanks to Dr. K. S. Brown (Universidade Estadual de Campinas, São Paulo), who gave the author valuable suggestions and offered him to describe this new species. Many thanks are also due to Mr. T. G. Howarth (retired from the British Museum-Natural History, London) and Dr. P. R. Ackery (British Museum-Natural History, London), who gave the author kind advices for investigation. Furthermore, the author is very grateful to Dr. Yoshihiko Kurosawa (National Science Museum, Tôkyô), who offered him many conveniences for investigation and accepted to preserve the holotype in the museum in Tôkyô above mentioned.

### *Sais browni* M. Takahashi, sp. nov.

Male, similar patterned to an Ithomiid butterfly, *Napeogenes inachia johnsoni* Fox & Real. Wing pattern, translucent dull yellow with black and tawny markings.

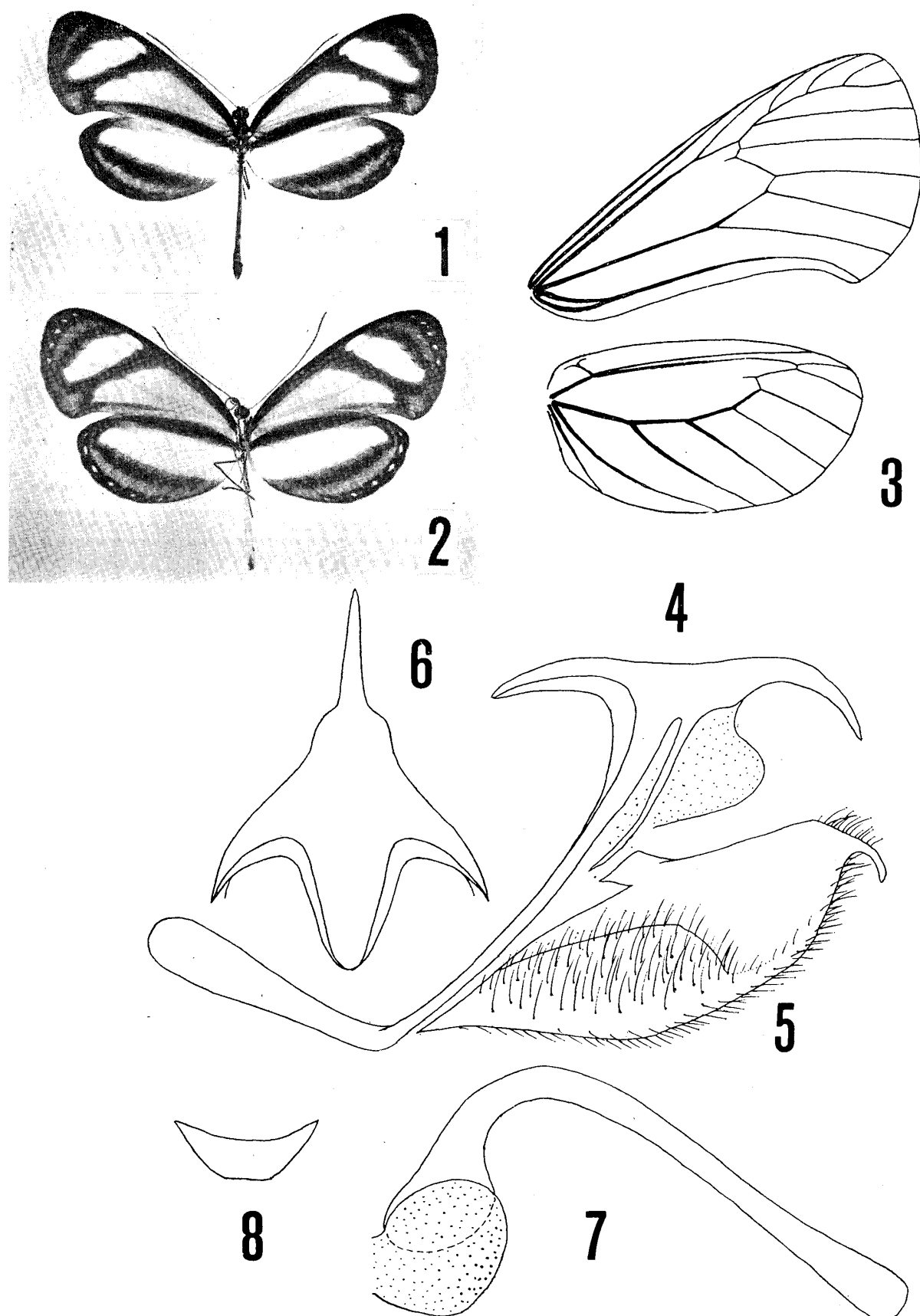
Forewing upperside, costal and distal margin bordered with black, widest at the apex. Discocellular bar thickened at the costal margin, tapered posteriorward and bifurcated near the anal angle. Black bar lies along the vein 2A, margined posteriorly with translucent dull yellow half way. In the black apical area, a tawny crescent band along the distal margin and a few faint submarginal spots. A tawny triangle spot lies at the anal angle. These tawny markings are prominent characters of this species and never occur in similar patterned *Napeogenes inachia johnsoni* Fox & Real. Translucent dull yellow area, separated by a discocellular bar and a bar along the vein 2A, slightly diffused with black scales proximally.

Hindwing upperside, principal part translucent dull yellow, a distal black band thickened midway, in which present a long crescent tawny band and faint submarginal spots. The anterior part of the black band faded to translucent. The area from the costal margin to the anterior half of the discal cell whitish grey without scales and beared with a tuft of long brownish white hairs.

Forewing underside, fundamentally as upperside. Submarginal spots are distinct, whitish grey, from the apex to the space  $Cu_1-Cu_2$ , seven in number, posterior two are smaller and the last one near extinct. Submarginal tawny band from the vein  $R_2$  to the anal angle. The area along the posterior margin grey, without scales.

Hindwing underside, as upperside. Submarginal whitish grey spots are distinct, six in number. Tawny band in contact with the black marginal band is rather developed not only in length but also in width. Costal margin dull yellow, bordered with a black bar posteriorly.

Forewing venation, the vein 1d is absent and the vein  $M_1$  is stalked from the vein Rs beyond the apex of the discal cell at a distance of more than twice the vein 2d length. Hindwing venation, similar to that of *Sais rosalia* (Cramer), but the vein 2d is sharply angled and separated into two segments, anterior segment clearly longer than posterior one. The stem of the bifid humeral vein makes an acute angle with the vein  $Sc+R_1$ , however, approximately a right angle in *S. rosalia* (Cramer).



Figs. 1-8. *Sais browni* sp. nov. : (1) holotype ♂, upperside, forewing length 25.8 mm ; (2) paratype ♂, underside, forewing length 25.9 mm ; (3) venation of male ; (4-8) male genitalia, (4) lateral aspect of ring, (5) inner aspect of right valva, (6) dorsal aspect of dorsum, (7) phallus, (8) juxta.

Male genitalia, tegumen saddle shaped, strongly produced anteriorward. Uncus evenly curved downward and pointed at the tip. Gnathos with a weakly chitinized narrow ribbon which is articulated at the ventral part of tegumen. Vinculum is slender without appendix angularis. Saccus as long as dorsum, thickened at the anterior end. Valva with a deeply folded sacculus, costal margin angled near the apex. The apex of valva bears a finger-shaped projection, which is directed down and inward. Phallus strongly curved downward at the anterior part, foramen about one-sixth the length of phallus. Juxta nearly crescent-shaped.

Head black, with dull yellow scales along the median line on the vertex and on the paraoculae area. Antenna black. Collar and patagium tawny. Dorsal part of thorax and abdomen principally dark brown, the former diffused with dull yellow scales. Ventral part of thorax and abdomen dull yellow.

Forewing length, 26 mm.

Female, unknown.

Distribution, Mitú, Vaupés, Colombia, South America.

Habitat, tropical rain forest along the Vaupés River, a tributary of the Amazon River.

Holotype ♂, Mitú, Vaupés, Colombia, Aug. 16, 1973, leg. M. Takahashi (preserved in National Science Museum, Tôkyô).

Paratypes 2♂♂, same data (preserved in the author's collection).

### References

- Fox, R. M. (1967) A monograph of the Ithomiidae (Lepidoptera), Part 3, The tribe Mechanitini Fox. Mem. Am. Entomol. Soc., 22: 1-190.  
 Fox, R. M. & Real, H. G. (1971) A monograph of the Ithomiidae (Lepidoptera), part 4, the tribe Napeogenini Fox. Mem. Am. Entomol. Inst. (Ann Arbor), 15: 1-368.

### Resumen

Se describe una especie nueva del género *Sais* (Lepidoptera: Danaidae, Ithomiinae).

A pesar de asemejarse la coloración de las alas a la de *Napeogenes inachia johnsoni* Fox & Real, la nueva especie, *Sais browni*, posee los caracteres del género *Sais*, principalmente, en la venación de las alas y en la genitalia del macho. Especialmente, la genitalia del macho posee el carácter específico y es distinta claramente a la de *S. rosalia* (Cramer) que se conocía como única especie del género.

Esta mariposa, la segunda especie del género *Sais*, se encontró en el bosque muy húmedo tropical a lo largo del Río Vaupés, alrededor de Mitú, Vaupés, Colombia.

El nombre específico es dedicado al Dr. Keith S. Brown (Universidade Estadual de Campinas, São Paulo).

### 要 約

*Sais* 属 (マダラチョウ科, トンボマダラ亜科) に属する一新種, *Sais browni* を記載する。本種の翅斑は *Napeogenes inachia johnsoni* Fox & Real によく似ているが、翅脈や♂生殖器等は *Sais* 属の特徴をもっている。この♂生殖器は、同属の唯一の種として知られる *S. rosalia* (Cramer) のものと明らかに異なり、この種に固有の特徴をそなえている。この *Sais* 属の第2番目の種は、南米コロンビアのヴァウペス州ミトゥ付近のヴァウペス川に沿う熱帯降雨林から発見された。種小名 *browni* は、ブラジルのトンボマダラ亜科の研究者ブラウン博士 (Keith S. Brown) に献呈されたものである。